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The Effects Of Bisphenol A From Polycarbonate Plastics On Lumbriculus variegatus

The purpose of this research project was to investigate the effects of bisphenol A (BPA) on the regeneration of *Lumbriculus variegatus*. Bisphenol A was leached from polycarbonate plastic bottles (baby bottles and water bottles) into spring water by either microwaving or boiling the water, or allowing the water to sit in the bottles at room temperature. The researcher cut each of the 39 worms into three sections, head, body and tail, and separated them into the 117 microcenterfuge tubes. The researcher measured the worms every 2 days for 10 days and tracked the regeneration rate of each segment. The data shows that the worms exposed to the water that contained BPA showed slower regeneration when compared to the control group only exposed to spring water. The control worms' head segments had an overall growth increase of 46.24%. When compared to the experimental groups, almost all of the head segments grew significantly less. For example in baby bottle B, the worms exposed to the water that was boiled had a growth increase of 3.22%, and in baby bottle D in which the worms were exposed to water that was at room temperature had an increase of 3.261% showing that just by being in the bottle and not heated up still affected the worms. The data shows the same trend for body and tail regeneration. Based on this data, the researcher concludes that BPA is affecting the regeneration rate in the worms and could possibly cause harm to humans ingesting the BPA.